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Cont.

168. (new) The kit according to claim 41 further comprising at least one helper probe comprising a nucleotide sequence selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, and the nucleotide sequences perfectly complementary to these sequences.

169. (new) The kit according to claim 42 further comprising at least one helper probe comprising a nucleotide sequence selected from the group consisting of SEQ ID NO:9, SEQ ID NO:10, and the nucleotide sequences perfectly complementary to these sequences.

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C. Please cancel claim 94 without prejudice.

#### REMARKS

Claims 39-42, 48-51, and 54-142 are pending. Applicants appreciate the indication made in Paper 26 that claims 39-42, 48-51, 54-56, 94-100, and 100-142 are allowable. Above, Applicants have: canceled claim 94 without prejudice; amended claims 39-42, 67-79, 82, 84-89, 91, 100, and 101; and added new claims 143-167. Briefly, claims 39-41 have been amended to include SEQ ID NO: 22, which specifies a preferred promoter-primer that incorporates the nucleotide sequence presented in SEQ ID NO: 1. Claims 42 and 100 have been amended to include SEQ ID NO: 23, which specifies a preferred promoter-primer that incorporates the nucleotide sequence presented in SEQ ID NO: 6. Claims 69-78 and 84-88 now refer to "primer" oligonucleotides to clarify that such oligos can be used in primer extension reactions. In claims 67, 74, 84, and 101, "bind to or extend through" has been changed to "hybridize to". Various other amendments have been made to certain of the previously pending claims to correct typographical errors or to insert preferred terminology (*see, e.g.*, claims 67, 68, 74, 77, 79, 84, 86-88, 89, and 101). The phrase "or contained within" has been added to claims 70 and 73. The term "further" has been added to claims 71, 77, and 87 merely to provide clarification. Claims 82 and 91 have been made multiply dependent. In claim 100, reference to "x" has been deleted, as reference to "x" in relation to SEQ ID NOS: 6, 23, and 7 will be understood to mean that, with regard to each oligo, "x" is independently selected, and thus "x"

can be the same or different with regard to different oligonucleotides. This usage is also consistent with other claims, for example, claims 39-42. In several of the claims, reference to certain SEQ ID NOS has been deleted.

Applicants have also added several new claims. These new claims contain subject matter canceled from the currently pending claims in order to present the invention in a more organized fashion. For example, subject matter canceled from claim 40 forms the basis of new claim 143, the latter of which otherwise parallels the language of the former. Similarly, new claims 144-146, which depend from new claim 143, parallel claims 50, 51, and 54, which depend from claim 40. Likewise, claims 147 and 148 parallel claims 67 and 68, the only difference being with respect to the SEQ ID NOS referred to in the claims. Claims 149 and 150 depend from claims 147 and 69, respectively, and concern primer oligonucleotides of from about 20 to about 100 nucleotides in length. *See* claim 40. Claims 151-155 parallel claims 69-73, the new claims being drawn to subject matter no longer claimed in the latter claims. New claim 156 builds on the composition of claim 82, as does new claim 157 with respect to claim 101. New claim 158 is directed to subject matter (kits) canceled from claim 101, as is the subject matter of new claim 159. New claims 160 and 164 are directed to subject matter no longer contained in claim 101, the amended structure of which these new claims conform to. Finally, new claims 161-163 and 165-167 depend from new claims 160 and 164, respectively.

No new matter has been added by these amendments. That having been said, Applicants expressly reserve the right to pursue subject matter no longer or not yet claimed in this application in one or more applications claiming priority hereto.

Applicants respectfully request reconsideration of the still-rejected claims in view of the following remarks concerning their patentability.

A. 35 U.S.C. § 112, Second Paragraph.

Claims 67-93 and 101 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite due to the phrase “bind to or extend through”. Applicants respectfully disagree because those ordinarily skilled in the art would understand the meaning of that phrase. However, in the interest of advancing prosecution, Applicants have replaced the allegedly offending language with “hybridize to,” as suggested in Paper 26, thereby obviating this rejection. Accordingly, it should be withdrawn.

B. 35 U.S.C. § 103(a).

Certain of the claims have been rejected under 35 U.S.C. § 103(a) as being unpatentable over New England Biolabs product nos. 1101-1108. While Applicants appreciate the examiner’s determination that the NEB adaptors do not render obvious Applicants’ claims with respect to primer oligonucleotides, Applicants respectfully traverse this new § 103(a) rejection because there is no teaching or suggestion in the art that the cited New England Biolabs’ ligation adaptor molecules could function as hybridization assay probes, as Applicants also claim.

The basis of this rejection appears to be the four nucleotide sequence alignments presented in Paper 26. *See id.* at p.6. In each of these alignments, a short NEB adaptor (in all cases, either 10 or 16 nucleotides in length) is aligned with one of Applicants’ sequences. However, none of these alignments reveals greater than 60% adaptor/target complementarity. Indeed, two of the alignments, NEB adaptor 1105 with SEQ ID NO: 3 and NEB adaptor 1106 with SEQ ID NO: 8, show only 6 bases of the 16 base adaptors being complementary to bases in the SEQ ID NOS with which they are aligned. *Id.* Applicants respectfully submit that ordinarily skilled artisans would not select a short ligation adaptor having such limited complementarity with a target sequence as a nucleic acid hybridization assay probe, and there is nothing of record to suggest that such molecules could have such a function. For this reason, this rejection should be withdrawn.

### CONCLUSION

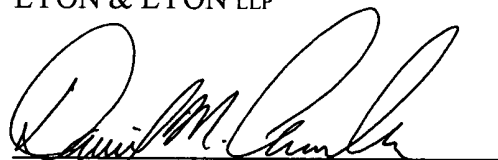
Herein, Applicants have amended or canceled certain of the pending claims, in addition to adding several new claims. They have also demonstrated the patentability of the claimed invention. Thus, a notice of allowance is earnestly solicited.

Should any matters remain outstanding, the examiner is encouraged to telephone the undersigned so that the same can be resolved without the necessity for any additional formal action and response thereto.

Respectfully submitted,

LYON & LYON LLP

By:



Daniel M. Chambers  
Reg. No. 34,561

633 West Fifth Street, Suite 4700  
Los Angeles, California 90071-2066  
(619) 552-8400

213 489-1600